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Agriculture Dept.

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Figure 1: Organization of Veterinary Services in Egypt, 1960.

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NIS 53 - Section 45

Egypt

A. General

Egypt's animal population is afflicted by numerous diseases which, in addition to curtailing production, are a serious public health problem. High disease losses and an inability to maintain sufficient numbers of livestock, force Egypt to import costly products from European areas or to resort to introduction of animals from neighboring disease infested countries.

Inefficient bureaucratic administration, coupled with ignorance and superstition of the rural population, has prevented utilization of a reasonably adequate veterinary force for animal disease control. Veterinary facilities in rural areas have been neglected, and insufficient incentive has been provided to encourage veterinary activities outside the convenient urban areas.

Recently, a move to provide veterinary facilities and services in rural areas has been undertaken. The establishment of over 300 veterinary stations to deal with animal health, and meat and milk sanitation has been planned over an 8-year period beginning 1956.

While a nucleus of competently trained veterinarians is available, most veterinary personnel lack capability in practical application of modern disease control methods and are inclined to pursue non-productive or repetitious work, frequently termed research.

The Egyptian veterinary services still require considerable assistance from

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foreign advisory personnel. However, despite the shortcomings of the veterinary profession in meeting its obligations, some progress is being made toward providing wider application of animal health care and veterinary public health measures. 1/ 2/ 4/ 9/ 12/ 13/ 14/ 15/ 16/ 19/ 20/

B. Environmental factors affecting health

1. Topography and climate -- The high density of human population in the Nile basin and delta, with attendant land requirements for raising commodities other than livestock, limit animal production. Arid areas have not yet been developed to provide sufficient fodder for significant numbers of animals. Climatic conditions in the major livestock growing areas are favorable for propagation of infectious organisms and parasites. 12/ 14/ 15/ 19/ 20/ 37/

2. Socio-economic pattern -- Most of Egypt's livestock is owned or managed by the uneducated fellahin, who are completely dependent on the Government veterinary services for instruction and advice on health care and treatment of animals. Although government planning over a period of years is designed to provide such services in livestock raising areas, little has actually been accomplished in concrete functional assistance. Apathy, ignorance and superstition continue to be basic contributing factors to the dissemination of animal diseases. 1/ 12/ 14/ 15/

4.. Nutrition

b.. Food supply and distribution -- Egypt, still deficient in livestock products despite numerous breeding and improvement schemes, is forced to import livestock as well as meat and dairy products. The introduction of livestock from neighboring disease infected countries has been and continues to be the source of

periodic serious animal disease outbreaks. 1/ 9/ 12/ 14/ 19/ 20/

c. Food sanitation, storage, and technology -- Refrigerated storage facilities are inadequate in the urban areas and virtually non-existent in rural communities. Facilities for marketing meat and milk from the production centers to consumer levels are frequently grossly unsanitary. Food-borne bacterial and parasitic infections are common, but insufficient efforts are made to eliminate the sources of contamination. 13/ 15/ 19/ 20/ 27/ 31/ 37/

C. Diseases

2. Diseases of animals -- Animal diseases constitute a primary drain on Egypt's livestock productivity, and are a major source of important human infections. Animal losses due to diseases are estimated at about 25 percent (50 million Egyptian pounds or \$143,000,000) of Egypt's animal wealth. Lax or belated veterinary measures, coupled with pagan beliefs and superstitions of the rural population, have allowed a number of serious diseases to spread through the livestock areas and have permitted some to become permanently entrenched. 1/ 9/ 12/ 13/ 15/ 16/

a. Prevalent animal diseases

(1) Parasitic diseases -- Parasitic diseases are responsible for about half of Egypt's livestock losses. In 1957, the damage inflicted by ecto-and-endo parasites was estimated at 22 million Egyptian pounds (\$63,000,000). 1/ 12/ 16/

The most important parasitoses are:

(a) Helminthiases -- Gastro-intestinal nematodiasis, fascioliasis, verminous bronchitis, echinococcosis, and cysticercosis, are widespread in Egyptian livestock. Control efforts are largely confined to treatment of affected animals, while only few attempts are made to combat the helminthiases through adoption of

1/ 4/ 2/ 12/ 13/ 14/ 16/ 38/
 proper husbandry practices.

(b) Arthropod infestations -- Sarcoptic and psoroptic mange cause widespread unthriftiness in Egyptian livestock. Cattle and buffaloes frequently are attacked by warble flies (Hypoderma bovis), resulting in severe losses of milk and meat. Tick infestations are very common, often caused by species capable of transmitting serious blood protozoan diseases. 1/ 12/ 13/ 14/ 16/ 29/

(c) Blood protozoan infections -- Veterinary authorities make some attempt to control blood protozoan infections through drug therapy and destruction of vectors; however, anaplasmosis (Anaplasma marginale, centrale, and cvis), babesiosis (various Babesia species), penderiosis (Gonderia annulata) and trypanosomiasis (Trypanosoma evansi and vivax) are still common among domestic animals in Egypt. 2/ 12/ 13/ 16/

(2) Rabies -- Rabies is a serious public health problem in Egypt. A large number of stray dogs and the presence of feral carriers, particularly jackals, contribute a continuous source of infection. In 1959, 2,577 dog bite cases were reported, 230 of which could be traced back to rabid dogs. The Anti-Rabies Institute of the Ministry of Health (location unknown) produces human phenolized anti-rabies vaccine at an annual rate of 1,300 liters. Public health and veterinary authorities have recognized the necessity of an efficient rabies control program and have initiated a campaign to eliminate stray dogs. Vaccination of dogs is not yet universally practiced; however, a rabies research institute is being established in Cairo (30-03H - 31-15E) to carry out research and to produce vaccine (Flury strain) for dogs. 1/ 27/ 33/

(3) Foot-and-mouth disease -- Foot-and-mouth disease (types A and O)

is widespread in Egypt. While the mortality is low, the debilitating effects cause considerable losses in milk, meat, and working power. The disease is recurrent in character, usually flaring up in November and subsiding in July. 1/ 9/ 16/ 24/ 30/

(4) Rinderpest -- Rinderpest appears periodically both from indigenous reservoirs and through import of infected cattle, particularly from the Sudan.

Vaccination has achieved rather popular acceptance and losses seldom reach serious proportions. 1/ 9/ 16/ 19/ 20/ 24/

(5) Tuberculosis -- Although only a few hundred animals have been subjected to the intradermal tuberculin test, results, coupled with carcass examinations at slaughterhouses, indicate that nearly one-third of Egypt's cattle and buffaloes are affected by this disease. 1/ 9/ 12/ 13/ 16/

(6) Brucellosis -- Egyptian veterinary authorities report a low incidence of animal brucellosis; however, aside from work conducted on government farms, attempts to diagnose the disease have not been extensive. Since no measures are taken to control the disease or segregate infected animals, it may be assumed that a large number of cattle and buffaloes as well as sheep and goats are affected by brucellosis. 1/ 9/ 16/ 27/ 30/

(7) Contagious pleuropneumonia -- Imports of affected cattle and buffaloes from the Sudan, and affected sheep and goats from the Sudan and Libya, frequently lead to outbreaks of contagious pleuropneumonia in susceptible stock. Some outbreaks of this serious disease become widespread before control through immunization and slaughter is achieved. 16/ 19/ 20/

(8) Poultry diseases -- Various serious diseases threaten Egypt's

expanding poultry industry. To meet this threat the Ministry of Agriculture has established two special laboratories, one for the production of poultry vaccines and the other for research and diagnosis. Units for poultry disease diagnosis have also been established at the veterinary laboratories in the provinces of Alexandria, Minia, and Kafir El Sheikh. Aside from Newcastle disease, fowl plague and fowl pox, which veterinary authorities are attempting to control through vaccination, the following poultry diseases are prevalent in Egypt: leucosis, pullorum disease, fowl typhoid, paratyphoid infections, coccidiosis, Aegyptianellosis and spirochaetosis. 16/ 16/ 21/

b. Other important diseases -- Other important animal diseases in Egypt are anthrax, pasteurellosis, salmonellosis, bovine mastitis, Q fever, sheep and goat pox, equine encephalomyelitis, deficiency diseases, and bovine infertility diseases or conditions. 1/ 4/ 12/ 13/ 16/ 17/ 21/

D. Veterinary organization and administration

1. Civilian

a. Organization -- The Ministry of Agriculture's Department of Veterinary Medicine, Department of Veterinary Laboratories and Research, and Department of Animal Production are responsible for most of Egypt's technical and scientific veterinary and allied activities.

Figure 1

The Department of Veterinary Medicine is composed of four sections:

(1) the Animal Health Section, directing the Animal Health Centers throughout the country; (2) the Communicable Disease Section, responsible for control of epizootics and zoonoses (this Section maintains close liaison with the Veterinary Department of

the Ministry of Public Health); (3) the Poultry Disease Section, whose duties include supervision of two special poultry laboratories; and (4) the Animal Protection Section, which is responsible for animal quarantine measures and administration of the animal quarantine stations at Alexandria (31-12N - 29-54E), Suez (29-58N - 32-33E), and El Shallal (24-03N - 32-53E).

The Department of Veterinary Laboratories and Research is charged with the production and distribution of veterinary biologicals and the supervision of the Veterinary Research Laboratory at Dokki, Cairo (30-03N - 31-15 E), the Serum and Vaccine Institute at Abbasiyah (30-04N - 31-17E), and the veterinary laboratories in the provinces of Alexandria, Minia and Kafr El Sheikh.

The Department of Animal Production directs the artificial insemination stations and the laboratories for animal breeding and physiology, animal nutrition, and poultry breeding.

The Veterinary Faculty at Cairo University and the Alexandria Institute of Public Health operate under the authority of the Ministry of Education.

The Veterinary Department of the Ministry of Public Health carries out meat and milk inspection throughout Egypt, except in the cities of Cairo and Alexandria where this function is assumed by veterinarians of the Municipal Public Health Departments.

The Higher Council for Science, in Cairo, is an autonomous coordinating and planning organization advising the various Ministries in matters of research. The Council also reviews and publishes scientific manuscripts. 1/ 4/ 5/ 7/ 8/ 9/ 18/ 27/ 31/ 36/ 38/

b. Legal controls

(1) Licensure -- Successful completion of a five and a half year veterinary course is required for veterinary employment in Egypt. 2/ 13/

(2) Quarantine -- Import of animals, meat and meat products, and milk and dairy products, is regulated by the Veterinary Quarantine Act, the Meat Inspection Act (Act No. 29, dated April 7, 1953), and the Milk Act (Act No. 132, of 1950), respectively. 1/ 18/

(3) Inspection -- Veterinary inspection of foods of animal origin is provided by law. However, meat inspection is lax and a stamp of approval does not necessarily mean that the product is wholesome or free from contamination. Illegal slaughter is very common, particularly in small villages located some distance from approved slaughterhouses. Milk control is carried out, but there is ample evidence that products are frequently adulterated and contaminated after inspection. 13/ 18/ 19/ 20/

c. Professional veterinary medical organization -- No information is available regarding professional organizations of Egyptian veterinarians.

d. Veterinary research -- Veterinary research is conducted at the Veterinary Research Laboratory in Dokki, Cairo, the Serum and Vaccine Institute in Abbasiyah, the Poultry Research and Diagnostic Laboratory (location unknown), and the Veterinary Faculty at Cairo University. The laboratories of the Department of Animal Production carry out research in the fields of animal nutrition and breeding. Most of these institutions have reasonably adequate equipment and facilities. Recent reports indicate that several qualified research workers are engaged in scientific studies. However, an appraisal of veterinary research papers published in recent years does not indicate significant research progress, and a good share of material published is neither original nor well documented.

Important research in medical bacteriology and entomology, some being of veterinary interest, is carried out by the U.S. Naval Research Unit No. 3 (NAMRU3) in Cairo. 1/ 7/ 12/ 13/ 14/ 15/ 29/ 30/ 31/ 36/ 37/

f. Emergency veterinary services -- No specific emergency veterinary service exists in Egypt. However, the government has allocated 10 million Egyptian pounds for the construction of 329 animal health centers throughout the country over an eight-year period beginning in 1956. The influence of 63 of such centers, established up to July 1960, on the widespread epizootic diseases in Egypt cannot yet be assessed. 1/ 2/ 9/ 12/

2. Military veterinary organization -- No specific information on Egyptian military veterinary services is available. However, according to a recent report, 40 veterinarians, engaged in food inspection, serve in the Armed Forces. 2/

E. Veterinary manpower

Egypt's veterinary manpower is estimated to consist of approximately ^{1,000} 600 graduate veterinarians (sources reporting close to 900 veterinarians apparently include technicians). Annual graduation of 50 to 60 veterinary students assures the availability of a sufficient number of veterinarians to meet future requirements. The majority of Egyptian veterinarians are government employed; only the cities of Cairo and Alexandria have a few private practitioners primarily engaged in small animal work.

Veterinary training is provided by the Veterinary Faculty at Cairo University in Giza, a suburb of Cairo. A five and a half year curriculum leads to the degree of Bachelor of Veterinary Medicine and Surgery. Diplomas in tropical medicine and animal hygiene, veterinary surgery, and food control, require one additional year, and the degree of Doctor of Veterinary Science requires three additional years of study.

Each year the Faculty graduates a sizable number of students from the North African and Middle Eastern countries. Staff members of European veterinary schools, particularly of those in Germany and Sweden, have been invited as permanent or visiting professors, and an increasing number of Egyptian students are being sent abroad for advanced study. In recent years, theoretical instruction at the Cairo Faculty has been fairly adequate, but insufficient attention has been given to the practical aspects of veterinary training.

The Alexandria Institute of Public Health provides a comprehensive training course for veterinarians. The course director holds a Master's Degree in veterinary public health from the University of Toronto, Canada.

The Ministry of Agriculture intends to establish a permanent training center offering training courses in animal disease control and public health to veterinarians and veterinary assistants. 1/ 2/ 9/ 10/ 11/ 12/ 13/ 25/ 27/ 28/

F. Veterinary facilities

The Department of Veterinary Medicine of the University of Agriculture is operating approximately 90 Animal Health Centers located throughout the country, each staffed by a veterinarian who, assisted by several technicians, gives treatment to livestock and advises the rural population in matters of animal health. It is planned to raise the number of Animal Health Centers to 329 by 1964.

The Department of Veterinary Medicine also supervises the Poultry Research and Diagnostic Laboratory (location unknown), the Poultry Vaccine Laboratory (location unknown), and the animal quarantine Stations at Alexandria, Suez and El Shallal.

Approximately 10 of the 319 planned artificial insemination stations are presently in operation. The Stations, maintained by the Department of Animal Production, are generally operated in conjunction with Animal Health Centers.

The veterinary laboratories in the provinces of Alexandria, Minia and Kafr El Sheikh, and the Veterinary Research Laboratory at Dokki, Cairo, which are directed by the Department of Veterinary Laboratories and Research, conduct diagnostic work and disease investigation. The same Department's Serum and Vaccine Institute at Abbasiyah produces veterinary biologicals.

Clinical as well as research facilities are maintained by the Veterinary Faculty of Cairo University at Giza, Cairo.

The U.S. Naval Research Unit No. 3 (NAMRU3) in Cairo, maintains a well staffed and equipped laboratory where important research, partially of veterinary nature, is being carried out. 1/ 4/ 5/ 7/ 9/ 12/ 13/ 30/ 31/ 37/

G. Veterinary medical supplies and materials

Most of the currently required biologicals can be adequately supplied by the Serum and Vaccine Institute at Abbasiyah and the Veterinary Faculty at Cairo University. Pharmaceuticals are imported for the most part. Veterinary medicaments are distributed through the Animal Health Centers, usually at no cost to livestock owners. Bureaucratic mismanagement restricts production and distribution of veterinary preparations, and production of some of the more complex biologicals require the technical assistance of foreign veterinary specialists.

The American Cyanamid Company recently has established an agency for the distribution of human and veterinary drugs in Cairo. Production of pharmaceuticals is envisioned and part of the operation will seek to utilize locally available raw materials. 1/ 7/ 12/ 13/ 14/ 26/ 35/ 37/

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H. Veterinary reference data -- Not included in this report.

I. Comments on principal sources

1. Evaluation -- The available publications and reports provided a reasonably accurate general picture of Egypt's animal health problems and veterinary services. However, detailed information, particularly regarding the exact location of various veterinary facilities, was lacking. Many reports, especially those from Egyptian sources, were primarily concerned with the planning of future activities, without giving sufficient information on past accomplishments and present problems.

Data on animal diseases were obtained from Sources 1, 3 and 4. Sources 5 and 1 contained information on veterinary organization and facilities, and Sources 2 and 6 were useful for evaluation of veterinary education and research.

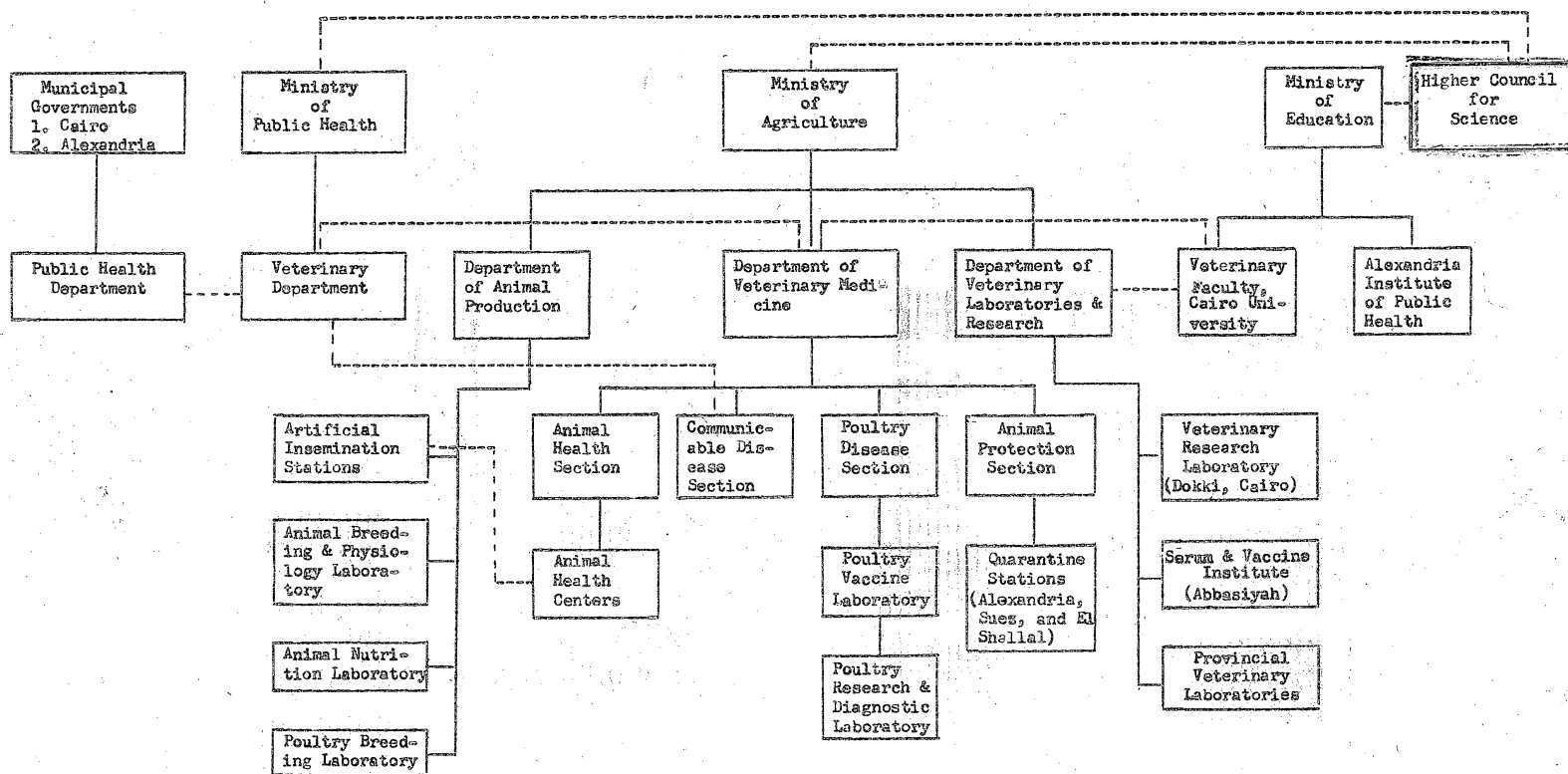
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Figure 1: Organization of Veterinary Services in Egypt, 1960.

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Sources: 1, 4, 5, 7, 8, 9, 18, 27, 34, 36, 38.

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